

REMARKS

SUMMARY:

The present application sets forth claims 1-40, of which claims 1 and 21 are independent claims. Original claims 3-15, 18, 19, 23-35, 38 and 39 have been indicated as having allowable subject matter. The drawings stand objected to under 37 C.F.R. §1.83(a) for allegedly failing to show every feature of the invention specified in the claims. Original claims 1, 2, 16, 20-22, 36, and 40 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,736,275 (Kaun). Original claims 1, 2, 21, and 22 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,374,490 (Aldecoa) or U.S. Patent No. 5,556,627 (LaFollette). Claims 17 and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,736,275 (Kaun).

Remarks concerning the above-referenced points from the July 15, 2003 Office Action are presented below in respective order for the convenience of the Examiner.

ALLOWED SUBJECT MATTER:

Applicants note with appreciation official indication that original claims 3-15, 18, 19, 23-35, 38 and 39 are indicated as having allowable subject matter. As such, claims 3, 10, 23 and 30 have been rewritten in independent form to include the limitations of respective base claims for clear allowance of claims 3-15 and 23-35, without entry of new matter.

OBJECTION TO THE DRAWINGS:

The drawings stand objected to under 37 C.F.R. §1.83(a) for allegedly failing to show every feature of the invention specified in the claims. More specifically, the drawings allegedly fail to show the plurality of current collectors in the storage device.

Applicants submit that the drawings do illustrate a plurality of current collectors, and thus no amendments to the drawings are presented at this time. More specifically, the exemplary energy storage device illustrated in Fig. 3A includes a current collector 24 and a bipolar current collector 29 in stack 32 (see the exploded stack illustrated in Figure

2), thus providing a plurality of current collectors. The exemplary energy storage device of Figure 3B includes a current collector 24 and two respective bipolar current collectors (one in each stack 32), thus also providing a plurality of current collectors.

Based on the above remarks, Applicants submit that the drawings are in compliance with 37 C.F.R. §1.83(a).

REJECTIONS OF ORIGINAL CLAIMS 1, 2, 6, 17, 20-22, 36, 37 AND 40:

Original claims 1, 2, 16, 20-22, 36, and 40 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,736,275 (Kaun). Original claims 1, 2, 21, and 22 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,374,490 (Aldecoa) or U.S. Patent No. 5,556,627 (LaFollette). Claims 17 and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,736,275 (Kaun). In view of the present amendments and the following remarks, Applicants respectfully traverse such rejections and request reconsideration thereof.

Applicants submit that all elements of claim 1 as presently amended are not disclosed singularly or in combination of the Kaun, Aldecoa and LaFollette references. Original claim 1 has been amended herein to more particularly set forth aspects of the external electrical connections of the claimed energy storage device. As previously set forth in original claim 1, one of the external electrical contacts for the energy storage device is provided by the pre-formed metal sheet outer casing around selected portions of the stacked assembly of cells and current collectors. Claim 1 as presently amended sets forth that the other external electrical connection (or common pole) for the energy storage device is provided by a terminal current collector (or tongue) that is part of the stacked assembly of cells and current collectors. Such terminal current collector extends laterally from the stacked assembly to provide an external electrical contact. (See original specification – page 7, lines 10-15).

The specific arrangement of the casing and laterally extending terminal current collector as respective external electrical contacts accommodates volumetrically efficient packaging for a generally flat and low height energy storage device. As such, battery closure can be made without the use of a grommet and there exists no need for crimping

or swagging of the packaging, which often requires accurate placement and/or control of closing pressures which can be time consuming and expensive.

Applicants submit that all elements of claim 1 as presently amended are not disclosed singularly or in combination of the Kaun, Aldecoa and LaFollette references. Therefore, such references cannot by law serve to respectively anticipate such claim under 35 U.S.C. §102. Based on the present amendments and above remarks, Applicants respectfully submit that claim 1 is in condition for allowance, and acknowledgement of the same is earnestly solicited. Furthermore, since claims 2 and 16-20 variously depend from otherwise allowable claim 1 and further limit the same, Applicants also submit that claims 2 and 16-20 are in condition for allowance.

Applicants further submit that all elements of claim 21 as presently amended are not disclosed singularly or in combination of the Kaun, Aldecoa and LaFollette references. Original claim 21 has been amended herein to more particularly set forth aspects of the external electrical connections of the claimed energy storage device. As previously set forth in original claim 21, one of the external electrical contacts for the energy storage device is provided by the pre-formed metal sheet outer casing around selected portions of the stacked assembly of cells and current collectors. Claim 21 as presently amended sets forth that another external electrical connection (or common pole) for the energy storage device is provided by a current collector (or tongue) that is part of the stacked assembly of cells and current collectors. Such current collector extends laterally from the stacked assembly to provide an external electrical contact. (See original specification – page 7, lines 10-15).

The specific arrangement of the casing and laterally extending terminal current collector that provide respective external electrical contacts in present claim 21 accommodates volumetrically efficient packaging for a generally flat and low height energy storage device. As such, battery closure can be made without the use of a grommet and there exists no need for crimping or swagging of the packaging, which often requires accurate placement and/or control of closing pressures which can be time consuming and expensive.

Applicants submit that all elements of claim 21 as presently amended are not disclosed singularly or in combination of the Kaun, Aldecoa and LaFollette references.

Therefore, such references cannot by law serve to respectively anticipate such claim under 35 U.S.C. §102. Based on the present amendments and above remarks, Applicants respectfully submit that claim 21 is in condition for allowance, and acknowledgement of the same is earnestly solicited. Furthermore, since claims 22 and 36-40 variously depend from otherwise allowable claim 21 and further limit the same, Applicants also submit that claims 22 and 36-40 are in condition for allowance.

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that the present application, including claims 1-40 is in complete condition for issuance of a formal Notice of Allowance, and action to such effect is earnestly solicited. The Examiner is invited to telephone the undersigned at his convenience should only minor issues remain after consideration of this response in order to permit early resolution of the same.

Respectfully submitted,

DORITY & MANNING,
ATTORNEYS AT LAW, P.A.

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Date



Richard M. Moose
Registration No. 31, 226

Post Office Box 1449
Greenville, South Carolina 29602-1449
Telephone: (864) 271-1592
Facsimile: (864) 233-7342